BIDWELL PARK

In 1905, Annie Bidwell gave 2250 acres to the citizens of Chico that formed a park that goes from downtown for 8 miles along Big Chico Creek. In 1995, the City Council bought the slopes to the south of the creek and to the east forming the 2nd largest city park in the United States.

ISHI the Last of the YAHI

In August 1911, the sole surviving member of the YAHI tribe left his hiding place on Deer Creek and gave himself up in Oroville. He lived, voluntarily, in the UC Museum of Anthropology at Berkeley until his death, from tuberculosis, in 1916. He learned some English and taught the U.C. professors some YAHI, including the word ishi, meaning "man", and much about the YAHI culture. He respected everyone and he was well liked by the people of the Bay area.

Geological History

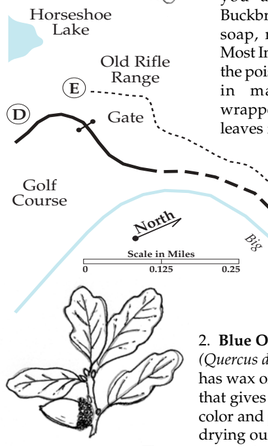
This trail will take you back through the ages: first to when the Maidu walked here and last to a very ancient era some 75 million years before the present ("mybp") —the Cretaceous Period of the Mesozoic Era. Dating back to that time and now located several hundred feet below you is the ancient sandy beach of the Pacific Ocean, called the "Chico Formation". It surfaces near the end of the trail but in the sandstone rocks beside the Creek you can still find shellfish fossils from that era. The slopes around you reveal the many-layered TUSCAN Formation made up of cool volcanic mudflows that sloshed intermittently over here between 1 and 4 mybp. During the last million years rains have eroded away soft parts of the top layers leaving scattered boulders on the surface.

The erosion debris was deposited at the edge of the valley forming alluvial fans that became hardened over time; you are standing on one of those old fans here at Horseshoe Lake. The deep fertile loams along the creek, on which the Valley Oaks grow, were deposited since glacial times 10,000 years ago.

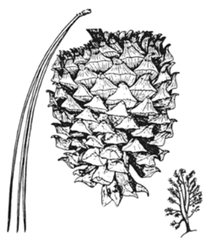
Plant Communities

The scattered Blue Oaks and Foothill Pines, with grasses growing between, form the FOOTHILL WOODLAND plant community. Along Chico Creek is a different ecosystem made up of water-loving plants—the RIPARIAN. In between, areas of brush make up the CHAPARRAL.

1. **Poison Oak** *(Toxicodendron diversiloba)* "Leaflets three—leave it be!" Oils (urushiols) from any part of this common plant will cause a red skin rash to appear in a few days on most people. Soap and water will remove the oils and prevent the rash. Near you are Soap Plant and Buckbrush, both loaded with soap, ready for you to use! Most Indians were resistant to the poison and used the stems in making baskets and wrapped acorn mush in the leaves for baking bread.

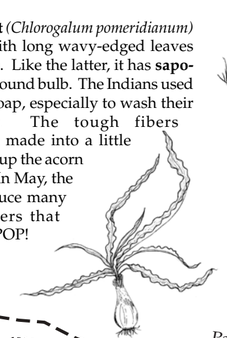


2. **Blue Oak** *(Quercus douglasii)* has wax on its leaves that gives them a bluish color and protects against drying out during the hot summer. The acorns are ripe in September and provide food for Acorn Woodpecker, Scrub Jay, CA (Beechey) Ground Squirrel, deer, and many insects. Look closely on the leaves and you will see several kinds of galls that contain the young larvae of several kinds of tiny **Gall Wasps**.



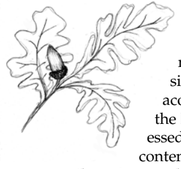
3. **Foothill** (Gray) **Pine** *(Pinus sabiniana)* grows with the blue oaks on the shallow soils of the Tuscan mudflows. The massive cones contain many large seeds which can be cracked open to give a delicious pinenut—try one! Split this open and you will see a tiny baby pine tree surrounded by nutritious stored food. Both Gray and Ground Squirrels tear the cones apart to get the seeds, leaving a stack of cone scales next to the trunk. The Indians stored baskets of seeds in their hogans for safe keeping. Scrub Jays carry thousands of seeds up to 8 miles away, carefully burying them for winter use—if they live that long. Without the pinenuts the Jays would starve and without the Jays the pines would not be replanted!

4. **Buckbrush** *(Ceanothus cuneatus)* is the common, 5-7 foot shrub with many stiff, short branches and tiny (1/2-inch) dark leaves. In the late winter, it is covered with small, white blossoms with a strong odor. They, and the fruits from them, contain a soapy chemical (saponin) that you can wash with just like soap. The saponin makes the leaves unpalatable to many insects and other herbivores that would eat the plant. In their roots are colonies of **nitrogen-fixing bacteria** that serve as fertilizer factories for them as well as the plants around them. Their high nitrogen content results in high protein which makes them excellent food for deer.



5. Common **Soap Plant** *(Chlorogalum pomeridianum)* is the lily-like plant with long wavy-edged leaves beneath the buckbrush. Like the latter, it has **saponin** in its large, underground bulb. The Indians used the bulb like a bar of soap, especially to wash their hair and keep it glossy. The tough fibers around the bulb were made into a little whisk broom to sweep up the acorn meal after pounding. In May, the tall flower stalks produce many one-inch white flowers that open with an audible POP!

6. **Yerba Santa** *(Eriodictyon californicum)* was prized by the Indians and also by the Spanish who called it Saint's Herb because of its medicinal value. Put a leaf in hot water and it will produce a tasty, greenish, aromatic tea that will cure you of anything that hot water will! A leaf can be wadded up and chewed like gum giving a bitter taste at first which is then followed by a sweetish sensation that the Indians found to be thirst-quenching. They also stuffed dry leaves into tubes of dry elderberry stems and smoked them like a cigar.

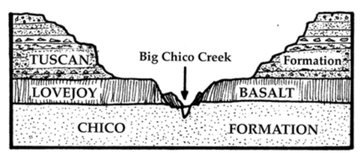


7. **Valley Oak** *(Quercus lobata)* is the immense tree that grows on the deep soils in our flat valleys. Its roots grow down to the watertable, six or more feet below the surface. The acorns are still today a favorite food of the Indians even though when unprocessed they are poisonous due to their high content of tannic acid (tannins). Luckily the poison can be leached out of the acorn flour with water. The wet mash was put in a water-tight basket, along with heated rocks, and cooked. Acorn mush or bread met about one-half of the Indians total food needs.

8. **Indian Grinding Rocks** are located near the creek at **Day Camp**; see if you can find them. A stone pestle was usually kept nearby and shelled acorns and other seeds were pulverized into a fine flour. We know that Maidus used these for the Yahis used a flat Metate and Mano for grinding A quarter mile to the north of Parking Area I, is a **Maidu Cave** with several dozen **Bedrock Mortars** carved into the floor that is well worth visiting.

9. **Blue Elderberry** *(Sambucus mexicana)* grows near the water where the soil is deep and moist. Anything green on this plant is very POISONOUS! and contains a volatile cyanide. However, the blue berries are edible and eagerly sought by birds. They make excellent pies, jam, and wine. The flowers make a pleasant drink and also excellent pancakes, when mixed with batter and cooked. They were important in Maidu medicines as well.

10. **Acorn Woodpecker** is the noisy, red-headed, black-and-white bird that lives in family groups near oak trees. A dozen will cooperatively build the nest, raise the group's youngsters, and peck acorn granaries in the bark of their trees to store food for the winter. Should a gray squirrel or Scrub Jay try to steal an acorn from the granary tree, the whole group will drive it away.



11. **Scrub Jay** is the blue and gray noisy villain of the oak woodlands, often robbing nests and hasseling other birds. It will bury acorns up to 8 miles from the oak tree and then remember that exact spot the following winter when it is hungry. In this way, whole forests of oaks are planted; you might call them the private orchards of the Jays! During cold winters, you might see the **Steller Jay**, a larger bird with a dramatic crest and blue-black plumage; it normally lives in the pine forests at higher elevations.

12. **Bear Hole** and **Diversion Dam**. The black, hard rock formation is named **Lovejoy Basalt** and flowed here as red hot lava about 20 mybp. It cooled quickly and crystalized into 5- or 6-sided columns called Postpiles. The trail and park road go over the top of the Lovejoy for the next mile; notice the pentagonal and hexagonal patterns in the path. A small concrete dam was built here about 1940 to divert water into the **Diversion Ditch** that contours its way to Horseshoe Lake. The idea was to use the water for the golf course but floods quickly took out portions of the ditch. It is a fun hike to walk along it back to your starting point.

Invertebrates are what we call the creepy-crawly critters that hang out under the rocks in the creek and serve as prey for larger animals like fish. Look for a moving, tubular, 1/2-inch form well-camouflaged with pebbles and debris glued to its case; inside is a **Caddisfly** larva (worm). To move, it pokes its head and legs out of the front end. Some may spin a web under water to catch tiny bits of debris or insects for food.. After a year of eating, it changes (metamorphoses) into a flying insect with four, clear wings covered with fine hairs. It mates and and then drops its eggs into the water at dusk; some species crawl into the water and glue their eggs to debris.

PARK RULES

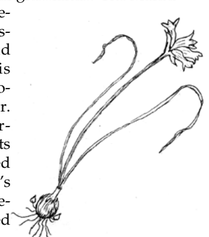
Dogs and **horses** belong north of the park road, not near the creek or on the trail (this water supplies wells downstream!). **Bikes** use the park road or the bike trails north of the park road, not the Yahi Trail—it is for pedestrians. **Bottles** and **glass** are not allowed; pack out all your trash (and any you see!). Trash containers are at the beginning of the gravel road.

.50 cents

13. **Mugwort** (Bronchitis Plant) *(Artemisia douglasiana)* is also known as Wormwood for its usefulness in getting rid of intestinal parasites. Crush a leaf and enjoy the smell of sage: not surprising, for it is related to Great Basin Sagebrush. It was an important medicinal plant for respiratory ailments, stomach ache, and headache. It was frequently used in Native American rituals and is still considered sacred today by many. In Europe, a related species was used to produce an alcoholic liquer called Absinthe that proved toxic and is banned today.

14. Common **Manzanita** (*Arctostaphylos manzanita)* has one-inch, evergreen leaves that can track the sun edge-on to prevent heat build-up. Its branches are shiny mahogany red as are the sweetish, 1/2-inch berries. The Maidu crushed the green, sour fruits to make a pleasant, lemonade-like cider; in fact, manzanita means "little apple" in Spanish. The ripe fruits are a favorite food of coyotes and bears—hence the name "bearberry". In winter, the white blossoms contain nectar that provides food for **Anna's Hummingbird**, which lives here the year around.

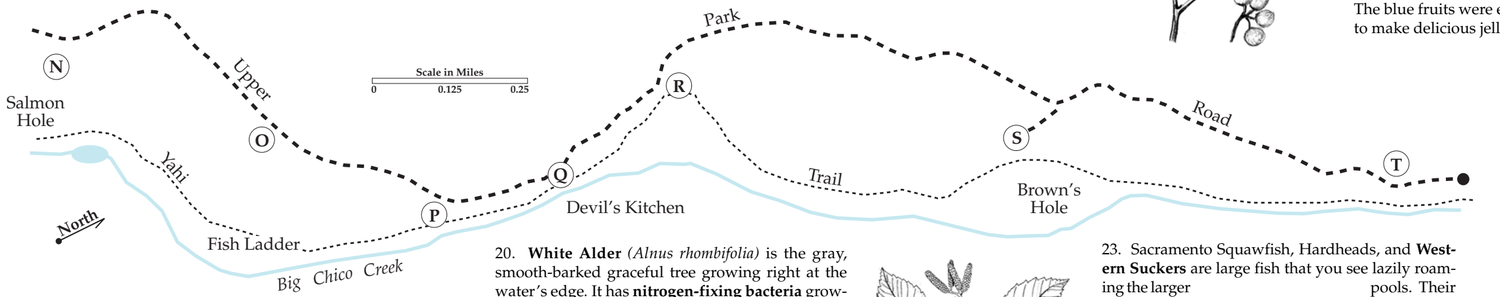
15. **Indian Potatoes** (Brodiaea) *(Dichelostemma capitatum)* are called **Blue Dicks** and are one of the first flowers to bloom in our grasslands. The Maidu women would pry the one-inch corms from the soil using a **digging stick** and roast them; the taste is somewhat like an Irish potato but much sweeter. When the corm is harvested, many tiny cormlets remain behind in the tilled soil and produce next year's crop; thus the women created and carefully tended potato patches.



16. **Deer Grass** *(Muhlenbergia rigens)* grows in seeps and forms bunches or hummocks; a large plant might be 100 years old. Before livestock grazing, California was covered with perennial bunch grasses like this; now most of the grasses you see are weedy annuals brought in accidentally from Southern Europe. The Maidu gathered the tall flower stems in midsummer and used small bundles of them as the foundation (warp) of their beautiful grass baskets. It took a year to make one and was constructed so tightly that it could hold water. Acorn mush was cooked in these by dropping in heated rocks.

17. **California Bay Laurel** (Pepperwood) *(Umbellularia californica)* was important to the Maidu for medicine, food, and insect repellent. When you buy bay leaves for cooking, this is the source. Rub the leaves on your skin and the oil from them will make your skin tingle and feel warm—just like liniment; in fact, the Maidu used the leaves to relieve arthritis pains and muscle aches. The huge granary baskets in which the Indians stored their acorn supply were lined with bay to keep out insects. Many of you will put a leaf in jars of nuts or flour for the same purpose. The 1/2-inch, plum-like fruit, was parched and the embryo (peppernut) eaten. Across the border in Oregon, Bay is called Oregon Myrtle.

18. The **Fish Ladder**, made up of a series of small concrete dams, was put in during the 50's above **Salmon Hole**. It was supposed to help **Chinook** (King) salmon make their way upstream through **Devils Kitchen** but floods have demolished it.



20. **White Alder** *(Alnus rhombifolia)* is the gray, smooth-barked graceful tree growing right at the water's edge. It has **nitrogen-fixing bacteria** growing on its roots in small, orange nodules. Its leaves, as a result of the nitrogen, have a high protein content and are very nutritious for the insect life in the creek—and ultimately the fish and other predators. In a ritual before salmon fishing, the Maidu would rub alder bark on their skin, coloring it orange; perhaps the reddish salmon were fooled by this camouflage?

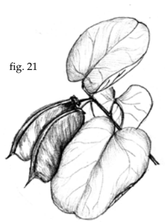
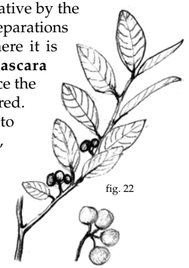


fig. 21

21. **Redbud** *(Cercis occidentalis)* produces a mass of gorgeous pink flowers in March that are followed by pods much like peas. When young and tender, the pods can be stir fried like snow peas. Maidu women would burn the bushes to the ground in the fall so that the new growth would be tall and straight and suitable for basketry. Strips of wood with bark would be tightly wound around the deer grass flowering stalks to form the coils for their baskets.

22. California **Coffeeberry** *(Rhamnus californica)* is a medicinal plant used as a laxative by the Maidu and still found in many preparations sold in your local drugstore; there it is known by its Spanish name **Cascara Sagrada** (sacred bark). To produce the drug, bark is dried and powdered. The fruits turn from green to red to black and resemble the coffee bean, hence the name coffeeberry; unfortunately it is POISONOUS and must not be eaten.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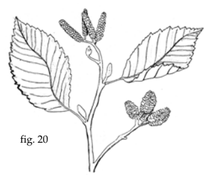
fig. 20

23. Sacramento Squawfish, Hardheads, and **Western Suckers** are large fish that you see lazily roaming the larger pools. Their forked tails and indifferent behavior distinquish them from the skittish trout as does the lack of a small adipose fin between the large dorsal (back) fin and tail fins. Most of them are 12-15 inches long but the squawfish can reach 4 feet and the hardhead 3! The sucker vacuums algae off rocks for its food while the others are predators of insects and other animals.

24. **Gum Plant** (Camporum) *(Grindelia camporum)* grows in sunny places on rocky, poor soil. Its one-inch sunflower heads have a glistening, gummy base (receptacle) that protects the yellow flowers from ants. Fresh crushed plants were used by the Maidu and Yahi to cure skin problems, like poison oak rash, or drunk as a tea for colds and coughs; it is still a favorite in European herbal medicine.

25. **California Wild Grape** *(Vitis californica)* is the vigorous vine that gives a junglelike look to the Riparian zone, next to the creek. The Maidus used it in making their huge acorn granary baskets which could hold and protect a two-year supply of this critical food. The baskets were raised on a pitch-coated leg and lined with bay or mugwort to keep insects away. The blue fruits were eaten or dried and can be used to make delicious jelly or juice.

26. **Dipper** (Water Ouzel) is the little, sooty-gray bird seen flying up and down the creek or perched on a rock at the water's edge. Its numerous oil glands allow it to seach for insects under water; in fact it can fly underwater at depths up to 20 feet! You might see it strolling along on the bottom, at any time of the year, if you watch carefully.

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Yahi Trail

Map and Guide

Upper Bidwell Park, Chico, CA.

The **Yahi Trail** begins at parking area (E), east of Horseshoe Lake, and goes eastward beside the park road and Big Chico Creek to the end of the road. You can access it readily from most of the parking lots.

This guide will introduce some of the geological and ecological features you will encounter as well as some of the historical places. While the Yahi villages were north of here on Deer and Mill Creeks the Yahis and their most notable member, Ishi (pictured above), certainly explored this canyon.

The path is rocky and, in wet weather, can be slippery. Bring water and, in summer, wear a hat. It is about 3 1/2 miles by the park road to the turnaround at the east end.